

Abstract

A method and apparatus coats a substrate with an inorganic-organic hybrid polymer material. The method generates and maintains a plasma according to the Dielectric Barrier Discharge (DBD) technique, method including the steps of introducing a sample in the space between two electrodes, generating a plasma discharge between the electrodes and admixing aerosols containing hybrid organic/inorganic cross-linked pre-polymers to the plasma discharge. Also, an apparatus generates the plasma and admixes the liquid coating material (precursor solution) in the form of aerosol to the plasma discharge.